

1 WHAT IS CLAIMED IS

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1. A method of controlling a network which includes network elements connected via links, and provides services, comprising the steps of:

10 creating view-configuration information based on network-configuration information with respect to each of the services such that the view-configuration information is related to the network-configuration information; and

15 displaying a view based on the view-configuration information with respect to each of the services, the view including both or either one of a physical network configuration of the network and a logical network configuration of the network.

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2. The method as claimed in claim 1, wherein said step of creating includes the steps of:

25 selecting network elements and links from a network configuration represented by the network-configuration information; and

creating the view-configuration information according to the selected network elements and links.

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3. The method as claimed in claim 1, wherein said step of creating includes the steps of:

35 selecting a connection from a network configuration represented by the network-configuration

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1 information; and

creating the view-configuration information  
according to the selected connection.

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4. The method as claimed in claim 1, wherein  
said step of creating includes the steps of:

10 selecting ports of network elements from a  
network configuration represented by the network-  
configuration information; and

creating the view-configuration information  
according to the selected ports.

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5. The method as claimed in claim 1, wherein  
said step of creating includes the steps of:

20 specifying attribute conditions of  
connections; and

creating the view-configuration information  
by extracting network elements and links relating to at  
25 least one connection that matches the specified  
attribute conditions.

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6. The method as claimed in claim 1, wherein  
said step of creating includes the steps of:

specifying a service name; and

35 creating the view-configuration information  
by extracting network elements and links relating to  
connections that provide the specified service name.

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1           7. The method as claimed in claim 1, further  
comprising the steps of:  
          providing matches between failure levels and  
failure labels with respect to different types of  
5 failures, the failure levels indicating significance of  
failures either as physical failures or as service  
failures; and  
          displaying a failure level of a failure  
occurring in the network in association with the  
10 displayed view.

15           8. The method as claimed in claim 7, further  
comprising the steps of:  
          controlling the failures by a unit of a node  
or a port of a node; and  
          selecting a failure level of a connection by  
20 finding a largest failure level along the connection,  
and displaying the failure level of the connection in  
association with the displayed view.

25           9. The method as claimed in claim 1, further  
comprising a step of selecting nodes and links on the  
displayed physical network configuration to set a route  
30 between edges.

35           10. The method as claimed in claim 1, wherein  
said step of selecting includes the steps of:  
          selecting the edges on the displayed physical

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1 network configuration; and  
setting the route between the edges by  
extracting nodes and links so as to use as small a  
number of intervening edges and links between the  
5 selected edges.

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#27</sup> 11. A system for controlling a network  
including network elements and links, comprising:  
a database which stores network-configuration  
information and view-configuration information such  
that the view-configuration information is related to  
15 the network-configuration information;  
a service-management server which attends to  
registering and updating of the information stored in  
the database, and defines views of a physical network  
configuration and a logical network configuration with  
20 respect to each of the services based on the view-  
configuration information stored in said database;  
a network-management server which collects  
information on configurations of the network elements  
and the links as well as information on failures, and  
25 informs said service-management server of a change in  
at least one of the configurations and the failures for  
a purpose of said updating; and  
a client which displays both or either one of  
the physical network configuration and the logical  
30 network configuration with respect to said client's own  
service based on the views defined by said service-  
management server.

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12. The system as claimed in claim 11,

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1 wherein said network-management server includes a  
failure-level-conversion table that provides matches  
between failure levels and failure labels with respect  
to different types of failures, the failure levels  
5 indicating significance of failures either as physical  
failures or as service failures.

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13. The system as claimed in claim 11,  
wherein said service-management server includes a  
connection-setting unit which controls settings of a  
connection between edges based on the edges, nodes, and  
15 links selected from the physical network configuration.

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